LESSONS FROM A STUDY

OF THE

CESAREAN OPERATION

IN THE CITY AND STATE OF NEW YORK,

AND THEIR BEARING UPON THE TRUE POSITION OF GASTRO-ELYTROTOMY.

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It is not necessarily requisite to the building of a new structure that an old and still useful one should be condemned and pulled down to give it room for a foundation. The world is wide and there is space and use enough for the temple of Cesar, as well as for that of its honored and new-born rival. We regret that we cannot speak in a more complimentary manner of the results of gastro-hysterotomy in the City of New York than Dr. T. Gaillard Thomas did at the last meeting of the American Gynecological Society in Philadelphia; but we can weaken the force of his expression, by saying that, although he is correct in his statement that there has been but one woman saved by the operation in 250 years, it must be remembered that in the first 210 years of this period there is not a single case on record for the said city, which brings us down to *forty* years in which to make our calculations for and against the operation.

We admit that the operation is a dangerous one, and a very dangerous one; *but deny his assertion that "it is the most dangerous operation in surgery."* Of 12 women operated upon by the Cesarean section in the City and State of New York, and in several instances by surgeons and surgical accoucheurs of considerable eminence, but one was saved; or 8½ per cent. This looks as if Dr. Thomas might be correct. But let us change the scene, and we find that of 18 women operated upon by the same method in the State of Louisiana, 14 women were saved. Oh, it may be answered, but these were nearly all blacks. True, but the worst case that recovered was of European blood. Take the State of Ohio, where all the cases were white, and what do we find? Eight women operated upon, and 6 women saved; or 75 per cent, against 77⅞ in Louisiana. Now we are not about to claim that the return of any of these States, or their combined average of

$55\frac{5}{119}$ percentage of women saved, is correct, as an exponent of the danger of this operation in the whole United States, for we have an entirely different method of measuring it, and one which we believe to be honest and therefore satisfactory. We must separate entirely the operation from the case, and see what it is *per se*—what is the danger of the operation in a series of cases operated upon under circumstances favorable to success. We cannot take the record of New York, which is the worst of any State in the Union—even more fatal than that of Great Britain—any more than we can that of Louisiana, which is the best, as it is unfair to appeal to either. We have collected, up to this date, 102 cases in the United States, and the average of the whole is more than five times the degree of success in the City and State of New York.

This paper is not prepared with any intention of throwing discredit upon a sister commonwealth in matters of surgery—far from it. We have too pleasing recollections of the period when we practised medicine in the City of New York to be willing to make any such attempt. Its failures have been used by one of its own faculty as an argument against the continuance of the Cesarean operation, and in favor of substituting a new method of surgical delivery for it; and we are about to dissect these failures, and see what is in them and what we should learn by them.

As far as we have been able to ascertain, there have been six Cesarean operations (gastro-hysterotomy) in the State of New York, with one woman saved, and seven in the city, with the same result; the case saved, in each instance, being the first. We will take the thirteen in the order of date, without reference to state or city.

1. 1822, January 29th, Nassau, Rensselaer County, N. Y. We have given abstracts of this and the following cases, with the exception of Nos. 5, 8, 9, 10, and 13, in this JOURNAL for Feb., 1872, Vol. IV., and shall only mention their prominent features. Dr. E. D. Bassett was called to see a young *quadroon* servant, of 14 years of age, at the town named above, and found that she had performed the Cesarean section upon herself, by an L-shaped incision through the abdomen and fundus uteri, whilst lying on a snow-bank; that she had delivered herself of a fetus *per vias naturales*, which she had buried in the snow; and that a second was protruding through the abdominal wound. He removed the fetus, dressed the wound, and attended to the case afterward, treating her antiphlogistically

according to the method of that period, and she recovered in twenty days. Dr. Bassett saw her alive and well at service in Troy, six years afterward.

Now why did this girl recover? We answer: 1st, because she was operated upon early; 2d, she was in full health and strength; 3d, no futile attempts had been made at delivery, or time wasted in waiting for nature; and 4th, because her uterus was in a fit condition to bear the incision; the risk of making it not being increased beyond what is natural, by prolonged uterine action, and the attendant exhaustion of system.

2. 1838, August 12th, New York City. Operation performed by Dr. Richard K. Hoffman. This is the case referred to, as "the only one saved in 250 years." The subject, Mrs. Day, came from Long Island, and was fortunate enough to fall into good hands. Dr. Crocroft called in Dr. Belcher, and the two, Dr. Hoffman, who in turn sent for another surgeon, and he agreeing with him, the operation was performed, after 24 hours of labor, the woman having a good pulse before, during, and after the operation. Mrs. Day was a dwarf of 4 feet, with a long body, and legs no longer than an ordinary woman's thigh. She was a primipara, 42 years old, and had a conjugate diameter of 1¼ inches. Not a very good subject, certainly, for "the most dangerous operation in surgery," and still she recovered. Why? Because she was in good condition to bear the operation, not having been exhausted by a prolonged labor, and attempts at version or craniotomy. She returned home to Long Island entirely well in four weeks. Her child was delivered alive, but, being deformed and feeble, soon died.

We now enter upon a record of eleven very instructive cases, all of which died.

3. 1845, June 11th, East Solon, Cortlandt County, N. Y., operation by the late Prof. Azariah B. Shipman. The subject, Mrs. S. K., was a white primipara of 41, having a fibrous tumor which forced the cervix uteri above the superior strait and to the left side, so that version, the use of the forceps, and craniotomy were impracticable. Mrs. K. was in labor at intervals for two weeks, before Dr. S. saw her first, lasting severely for two days, and after an interval of nine days, again for three days more, early in which last the membranes ruptured. Three accoucheurs were in attendance when Dr. S. arrived. The woman by this time was greatly exhausted, had a weak pulse of 120, and an anxious, haggard, and sunken countenance. The operation was considered hopeless by the whole of the consultants, but was performed at the urgent request of the patient. Uterus found of a dark chocolate color, and parted before the knife as if partially decomposed. Child of large size, and had been dead several hours. Woman died of shock and exhaustion in an hour.

As every Cesarean operation in our country where there

was a fibrous tumor has proved fatal except one, where the labor lasted but fourteen hours, it was no wonder that it failed in so protracted a labor.

4. 1855, October 17th, Corning, New York; operation by Dr. Joshua B. Graves.—Subject a dwarf, with full-sized body, but extremities like those of a girl of 10—exhibited as a curiosity; had 14 physicians to see her, 10 present when Dr. G. arrived. She had then been 4 days in labor, with waters evacuated on the first. Woman cold, feeble, and without pains. Improved under rest and stimulation, with return of pains. Conjugate diameter 1 inch; transverse 5½. Operation removed a boy of 7 pounds, who lived and was alive at the age of 14.

Woman bid fair to recover, and might have done so, as the wounds were healing, and there was no peritonitis, but for the fact discovered after her death, at the end of six days, that a young accoucheur had three times transfixed the rectum and wounded the promontory of the sacrum, under an impression that it was the fatal head, in an attempt to perform craniotomy.

It was certainly no fault of the Cesarean section, or of its operator, that the patient died.

5. 1860, New York City, operation by Dr. T. Gaillard Thomas. Woman white, aged 28, taken with eclampsia when near her full term of pregnancy. After twelve or thirteen convulsions, during a period of six hours, she became moribund, and Dr. Thomas operated upon her, but she died under the operation, the only instance on record where this occurred in our country. It once happened also in England. The fetus was dead.

As these are all the particulars we have of this case, we make no comments, except to say that the operation ought not to be charged with the fatal result.

6. 1860, November 3d, New York City, operation by Prof. Fordyce Barker. White woman, 38, with exostosis from sacrum, in labor 2 days, or about a day and a half too long. Conjugate, 2 inches, pulse 120 at time of operation, and 134 to 140 after it. Died of peritonitis in 97 hours, child living in 1871, and named "Cesarea." It weighed 9¾ pounds when delivered.

Had this woman been operated upon in from six to twelve hours after her labor began, she would have had three chances to one of recovery, the chief danger of peritonitis lying in the risk of incising the uterus late in labor. As there were traces of syphilis in the woman, this may also have made the case more unfavorable. Had Dr. Barker been called in early, as he should have been, he would have operated with a much better hope of success.

7. 1866, November 26th, Westchester County, N.Y.; operation by Dr. G. J. Fisher, of Sing-Sing. Woman ~~black~~ fair, 39—contracted pelvis, arm presentation—long in labor and much prostrated. Still, did well after operation for three days, when her husband came home drunk, quarrelled with her mother, and she jumped out of bed to protect her. This caused her death from shock and exhaustion in twelve hours.

But for this unfortunate occurrence, Dr. Fisher might have saved his patient. The Cesarean operation has to carry a load of responsibility in the way of death that does not properly belong to it.

8 and 9. 1867 and 1868, New York City; operations by Dr. Thomas C. Finnell. Both women German primiparæ, each having a sacral exostosis, each in labor 3 days, each operated upon *in extremis*, and each dying of exhaustion in 48 hours.

In but one point did the cases differ, as in No. 8 the child lived, and was called after "Macduff;" who being "*untimely ripped*," could not have been removed by the Cesarean section, which is not untimely, unless it be in the sense of lateness.

10. 1869, New York City, same operator. Girl black, 16, with deformed pelvis, conjugate $1\frac{7}{8}$, in labor 4 days, and almost pulseless, died in 24 hours of hemorrhage and exhaustion; which is not to be wondered at under the circumstances.

We cannot say that Dr. Finnell was unfortunate in the results of his operations, as these were to be anticipated under the circumstances; the misfortune rather lies in the truth that the accoucheurs did not appear to be aware of the fact that, in such cases, *delays are dangerous and generally fatal.*

11. 1870, January 1st, Kingsbridge, New York; operation by Drs. Paluel de Marmon and C. F. Rodenstein, on an Irish woman of forty, with a conjugate diameter of $2\frac{1}{8}$, and transverse $2\frac{1}{4}$, who had been in labor 44 hours, and was much exhausted when operated upon. She died of metro-peritonitis in 48 hours; the child lived.

12. 1871, November 23d, Albany, New York; operation by the late Dr. John V. P. Quackenbush, on a white dwarf of 30, with a deformed pelvis; after a labor of 3 days, two of which were under a midwife. Child destroyed by craniotomy; woman died of peritonitis in 72 hours.

13. 1874, March; New York City; operation by T. G. Thomas, on a white woman of 30, with a uterine fibroid diagnosed several months before. Was warned of the danger of pregnancy, and urged to report the same, which she did not do. Under care of midwife, funis prolapsed and torn off; large fibroid of uterus; ver-

sion and craniotomy impossible; uterine incision closed with silver sutures; child dead; violent peritonitis in 24 hours, and death in 3 days.

But for the fact that all fibroid tumor cases have proved fatal after gastro-hysterotomy in the United States but one, this should have been a favorable operation, as it was done in good season. Gastro-elytrotomy was inapplicable, as the fetus was blocked up in the uterus.

We have given a résumé of thirteen cases, with two women and four children saved; a sad record, but one that could have been very nearly calculated upon beforehand, in view of the almost universal unfittedness of the subjects to bear the operation. The history of these cases shows a great want of knowledge as to the danger of delay on the part of the class of accoucheurs frequently called upon to deliver the lower Irish, German, and colored women in our large seaports, where they are fond of congregating. This is, however, not much to be wondered at, since we were once present at a consultation in which two leading obstetrical professors unhesitatingly recommended the Cesarean operation in a case of pelvic deformity, where the woman had been in strong labor for four days, and where, from the comparative ease with which one of them afterwards delivered her by craniotomy, it was evident that the operation was not required. The woman made a rapid recovery, but had the surgeon in consultation yielded, the patient would not have had one chance in four of being saved, although her child would have been alive.

In just such cases as this does the operation of gastro-elytrotomy come in as a valuble substitute for gastro-hysterotomy. This woman was still moderately strong, although four days wasting her strength to no purpose, under the care of a midwife who was ignorantly waiting for nature; but her uterus was in no condition to bear with safety a traumatic injury. It is true that such cases, and even much worse ones, have recovered, but the statistics of our country are very unfavorable in their lesson under such circumstances. Prof. W. H. Byford, of Chicago, remarked on September 27th, before the American Gynecological Society, that it was "very dangerous to open the abdominal cavity of a parturient woman." We are not of his opinion—this is not the chief source of dan-

ger in the Cesarean section; it is the incision of the uterus, and this is greatly increased by the continuance of labor beyond a few hours, especially if the uterine contractions are violent. Dr. Byford operated on a case November 14th, 1847, and the woman died in two and a half days, presumed of peritonitis. Why? She was in labor three days under two midwives, and later an accoucheur; had nodes on her shins, an exostosis of the ischium, pulse of 110, a flushed face, exhausted forces, and the waters had been discharged forty-eight hours. Just the case, in the future, for avoiding the danger of incising the uterus and removing the fetus by the sub-peritoneal section and vaginal laceration. We were glad to find that Dr. H. J. Garrigues, of Brooklyn, in his paper on "Gastro-Elytrotomy," before the society just quoted, laid particular stress upon the fact that the vagina could not with safety be cut, but must be torn, to avoid hemorrhage; as some of our trans-Atlantic brethren have fallen into an error on this point, in describing the operation, merely speaking of dividing the vagina, without special reference to the manner of doing it.

Although Dr. Thomas, as an argument to show the danger of the Cesarean section, went back 250 years in the medical history of New York City, and only found one successful case, we have never yet been able to find an instance of the operation in any section of the Union, as far back as one-third of this period. We must remember that one-hundred years ago New York was but a small town with about one inhabitant where she now has forty, and that she neither possessed the material to constitute a necessity for the operation, nor perhaps the surgeon who might be ready to perform it. Dr. Physick, of Philadelphia, has been called the father of American surgery, but he never operated in this way, and, in fact, declined a case which afterwards recovered under the knife of another. When emigration brought in the ricketty women of the Old World, the necessity for gastro-hysterotomy arose in our northern cities; but prior to this the French surgeons of Louisiana were called upon to administer relief to slave women who had been the subjects of rickets in childhood, and had their pelves deformed thereby. The first puerpero-abdominal operation of any note in the city of New York of

which we have a record was that of Dr. Charles McKnight, about 1792 or 1793, in a case of extrauterine pregnancy, for the removal of the dead fetus.

Fear and the statistics in English obstetrical works have made many believe that the Cesarean operation was a fearfully dangerous operation, and so to avoid it, have by postponement and futile meddling done all they could in a case to make the work of the surgeon of no avail. About seventy-five per cent of all cases requiring the operation in the end, have been thus treated before the operator was called in.

One-fifth of all our Cesarean cases have been dwarfs; a greater than ordinary necessity, therefore, for a very early operation. We instance one (No. 42) from our case-book, the woman being 23, and 3 feet 9 inches in height. She was in labor 4½ hours only, recovered in 4 weeks, and her child lived. Operator, Dr. Charles S. Mills, Richmond, Va., 1856. Take another (No. 57): 4 feet 5 inches; in labor 2 hours, and already becoming exhausted; recovered, and is now living after 17 years. Operator, Dr. Barnes, Hanover, Northampton County, Pennsylvania, 1861. Contrast them with No. 90, 3 feet high; or No. 50, 3 feet 2: the first, over 2 days in labor, lived 2 days after the operation, and died of exhaustion; the second, 42 hours in labor, with 3 spent in craniotomy, to no purpose, died in 63½ hours, of peritonitis.

There are two great general classes of surgical cases: one, in which the operator selects his own time, and with reference to its being a favorable one for the patient; the other, in which an emergency forces the operation upon him, in a way that may be very unfavorable for the case. Statistics based upon the latter are very unsatisfactory, as much more will often depend upon the state and health of the patient than the gravity of the operation. It is in this way we regard the Cesarean section. Although, under ordinary circumstances, by no means as dangerous an operation as extirpation of the uterus, primary amputation at the hip joint, and several others, it ought to be much less so in comparison than it is, and could be made so, if all accoucheurs and midwives were brought to understand the importance of an early operation to success. If all cases were subjected to the knife in a few hours after the commencement of labor, we should expect to advance the

proportion saved to 75 per cent of mothers and children, as this has been the result in the early cases in our collection, *i. e.*, 18 *women and* 21 *children saved in* 24 *operations.*

We have now to consider the advantages and disadvantages of the two methods of operation:

1. *Relative mortality.* This question is far from being settled by 5 operations with 2 deaths, as the first 5 Cesarean cases in our record saved 4 women. There is this much to be said, however: that the new operation would appear to be safer in the cases of women long in labor, whose uteri are then much more dangerous to incise than in the early hours of parturient effort.

2. *Relative simplicity of character.* Of the capital operations of surgery, gastro-hysterotomy is one of the most simple and easy of performance, and has been done on several occasions with the instruments of a pocket-case. Gastro-elytrotomy, on the contrary, is not at all simple, and requires an intimate knowledge of anatomy and great care in execution. It is a form of operation that will be chiefly confined to the surgeons of large cities.

3. *Operations repeated.* In our record of Cesarean cases, we have 7 women operated upon twice, and 1 three times, with 3 deaths. After 1 operation by gastro-elytrotomy, we believe that the peritoneal adhesions would be such as to prevent a repetition.

4. *Sequelæ.* Rupture of the uterus, hemorrhage from the incision, utero-abdominal adhesions, and intestinal strangulation in the uterine wound, are all avoided by the subperitoneal section. Pelvic cellulitis and abscess may take the place of these after the new operation, and the bladder may be opened or ureter injured.

We believe that each operation has its advantages, but do not believe that, in a series of early operations, there will be found any less rate of mortality in gastro-elytrotomy than gastro-hysterotomy.

We were first led to understand the true source of danger in the latter operation by a careful study of the results of laparotomy after rupture of the uterus, in our own country. We asked ourselves why such cases recovered so much more generally than those of the Cesarean class. We then com-

pared the mortality of the Cesarean cases subjected to an early operation, and when in favorable conditions, with those operated upon by laparotomy, and found a small percentage in favor of the former. We then examined into the causes of death in each, and thus, step by step, adopted the views we now hold. We hear much of the dangers of hemorrhage after gastro-hysterotomy, although but comparatively few die directly from it; to avoid it, the uterus should be opened while it still possesses a vigor of contractility. The great source of danger is from septic poisoning, metro-peritonitis, or uterine phlebitis, originating in an organ which has been incised after it has become injured by long-continued action tending to atony, a state resembling contusion, or a condition of decided pathological change, as in case 3 of this record. As a general rule, the subjects for the Cesarean operation are much below the physical average, and this of itself makes it all important that they should have all the advantages of as early an operation as possible, before their little strength is wasted.

713 LOCUST ST., OCT. 1ST, 1878.